Homework 1 – Gallimaufry

C++ II

Description

For this assignment we will review classes, objects, file IO, and collections from C++ I.
Consider a file with Service information in the following format separated by comas:

1. The name of the client.
2. The service sold (such as Dinner, Conference, Lodging, and so on)
3. The amount of the sale.
4. The date of that service.

With that file, you will determine some simple descriptive statics and write the data to output files.

Specifications

You will need to complete the following:

1. Write a program that reads a file as described from above and displays the total amount for each service category to the use.
2. Display an error if the file does not exist or the format is incorrect.
3. Write separate files for each service category, containing the entries for that category along with descriptive statistics for that category.
   a. Min sale
   b. Max sale
   c. Range of sales
   d. Average of sales
4. Name the output files for the service data they contain (i.e. Dinner.txt, Conference.txt, and so on).
5. Create a class "service" that models a specific sale (name of client, service, amount, and date).
6. Create a class "services" that contains an STL collection of objects of the class defined above – "service").
   a. The services class should have methods to filter the data, determine the stats for each type, etc.
7. Round all calculation results to two decimal places.
8. Display to the user the name of the files created.
9. Create a text file with 10,000 entries to test your code. (you can use excel to generate random data).
10. Load your data file in excel and create a pivot table to verify the results of your program are correct.
11. Make sure you put a comment at the top of the code file which contains your name and the assignment.

12. You should have 5 C++ files service.h, service.cpp, services.h, services,cpp, and main.cpp

Documentation

You will create two documents.

The first is a document (.docx, .rtf, .pdf) which contains the following:

- Your name and assignment.
- A screenshot of your code output.
- A detailed description of the STL container you used to solve this problem and why.

The second document is the excel file (.xslx) that contains your 10K records of data and the pivot table which shows the results are correct.

What to Submit

You need to submit your C++ code files along with your documents. Make sure your document is in the correct format and all your files include your name and assignment. **_ZIP_** your C++ code, but **DO NOT** zip your document files.